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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/431,559	10/29/1999	SHMUEL OVADIA	JMBDP0104US	8867

7590

10/25/2002

THE LAW OFFICE OF EDWARD LANGER
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2011 CRYSTAL DRIVE SUITE 210
ARLINGTON, VA 22202

EXAMINER

WAKS, JOSEPH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 10/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/431,559

Applicant(s)

OVADIA, SHMUEL

Examiner

Joseph Waks

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-5, and 7-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Vowles et al. (US 5,405,250)** in view of **Tharaldson (US 4,023,515)** and **Bell (US 4,206,608)**.

Vowles et al. disclose a system for conversion of wave energy in a body of water having a floor and including a stationary support element 5, 17 rigidly mounted to the floor (Re column 4, lines 48-52), a buoyancy apparatus including a buoy portion 23 formed with an energy collection apparatus in the form of a cavity 24a having a sloped opening 24b facing the oncoming waves 25 and a wave diversion surface 27a, a coupling apparatus comprising two parallel arms 2 of equal length (Re Figure 6) allowing the buoyancy apparatus to move in a portion of a circular path with respect to the support element, a piston apparatus 8, and a piping system 22 connecting the piston with a hydraulic motor (Re column 5, lines 67-68 and column 6, lines 1-4), and a counterbalancing weight 3. However, **Vowles et al.** do not disclose the piping system including a pressure tank coupling the hydraulic fluid in the piston apparatus to the hydraulic motor wherein the fluid is transported via pumping action taking place during both, contraction and expansion of the piston apparatus and having a pressure tank and the piping system

connecting the hydraulic fluid from the piston apparatus to the pressure tank and further connecting the pressure tank to the hydraulic motor wherein the pressure tank containing a gas maintained at high pressure in the range of hundreds atmospheres for regulating pressure applied from the tank to the hydraulic motor.

Tharaldson discloses in Figures 1 and 2 the piping system coupling a hydraulic fluid in a piston apparatus 20 to a hydraulic motor wherein the fluid is transported via pumping action taking place during both, contraction and expansion of the piston apparatus via a pressure tank with a plurality of one way valves 24, relief valve 32, for the purpose of providing a wave powered pumping system utilizing both upward and downward movement and maintaining the pressure demand in the hydraulic fluid system during the time when the water action is insufficient to meet the demand.

Bell discloses in Figures 1 and 2 a system 12 for conversion of wave energy having a high pressure tanks 36 or 136 and the piping system 30, 32, 34, 72 and 40, 38 connecting the hydraulic fluid from the system to the pressure tanks and further connecting the pressure tanks to the hydraulic motor 42 wherein the pressure tank containing a gas maintained at high pressure in the range of hundreds atmospheres for regulating pressure applied from the tank to the hydraulic motor (Re column 6, lines 31-43) for the purpose of storing the energy to compensate for the variation in availability of the wave energy and to provide an economically feasible system on a large scale.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the conversion system as taught by **Vowles et al.** and to provide the piping system coupling the hydraulic fluid in the piston apparatus to the hydraulic motor

wherein the fluid is transported via pumping action taking place during both, contraction and expansion of the piston apparatus and having a pressure tank and having a pressure tank and a piping system connecting a hydraulic fluid from the piston apparatus to the pressure tank and further connecting the pressure tank to the hydraulic motor as taught by **Tharaldson** for the purpose of providing a wave powered pumping system utilizing both upward and downward movement and maintaining the pressure demand in the hydraulic fluid system during the time when the water action is insufficient to meet the demand.

It would have been further obvious to one having ordinary skill in the art at the time the invention was made to design the combined conversion system and to provide the pressure tank containing a gas maintained at high pressure in the range of hundreds atmospheres for regulating pressure applied from the tank to the hydraulic motor as taught by **Bell** for the purpose of storing the energy to compensate for the variation in availability of the wave energy and to provide an economically feasible system on a large scale.

Response to Arguments

4. Applicant's arguments with respect to claims 1 and 5 have been considered but are moot in view of the new ground(s) of rejection.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.


JOSEPH WAKS
PRIMARY PATENT EXAMINER
TC-2800

JW
October 16, 2002